

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 3, 5, 7-8 have been amended as follows:

3. (Amended) A utilization of the method according to claim 1 or 2 in a method for the in-vitro amplification of nucleic acids with the following steps: a) decomposition of the nucleic acids into single strands, b) hybridization of primers to the single strands of step a), c) elongation of the hybridized primers of step b) by (desoxy-) ribonucleoside triphosphates by means of a polymerase, d) return of the nucleic acids obtained in step c) into step a), steps a) to d) being repeated so often, until a given amplification factor has been achieved and the electromagnetic radiation being irradiated in step a).

5. (Amended) A device for carrying-out a method according to one of claims 1 to 4, comprising a reaction chamber for receiving a solution with nucleic acids, a device for generating electromagnetic waves and an antenna element for irradiating the electro-magnetic radiation, the antenna element being arranged immediately at the reaction chamber and at least one operating frequency of the device for generating electro-magnetic radiation being in the range of 10 to 250 GHz and/or 0.5 to 2.0 THz.

7. (Amended) A device according to claim 5 or 6, characterized in that the reaction chamber is configured as an agitator vessel reactor.

8. (Amended) A device according to one of claim 5 or 6, characterized in that the reaction chamber is adapted as a tube reactor, in the interior of the tube reactor and in the direction of longitudinal extension of the tube reactor standing electro-magnetic waves being generated.